

What is claimed is:

1. A method for identifying call appearance values in a PBX device coupled to multiple ISDN BRIs said method, for each BRI coupled to the PBX device, comprising the steps

5 of:

- (a) generating a first call from PDN1 to PDN2 in the same BRI circuit; and
- (b) monitoring the message exchange on the D channel to obtain first Call Appearance information.

10

2. A method according to claim 1 further comprising the step of:

- (c) obtaining first Call Appearance information from the D channel.

15

3. A method according to claim 2 further comprising the steps of:

- (d) putting the first call on hold;
- (e) generating a second call from PDN1 to PDN2 in the same BRI circuit; and
- (f) monitoring the message exchange on the D channel to obtain second Call Appearance information.

20

4. A method according to claim 3 further comprising the step of:

25

- (g) obtaining second Call Appearance information from the D channel.

5. A method according to claim 4 further comprising the step of:

- (h) repeating the steps of putting a call on hold, generating another call, and monitoring the D channel until the generated call results in a busy signal.

6. A method according to claim 5 further comprising the step of:

- (i) repeating steps a-h with calls being generated from PDN2 to PDN1.

7. A PBX device coupled to multiple ISDN BRIs, said PBX device comprising:

- (a) dialing means for generating a first call from PDN1 to PDN2 in the same BRI circuit; and
- (b) monitoring means monitoring the message exchange on the D channel to obtain first Call Appearance information.

8. A PBX device according to claim 7 further comprising:

- (c) capture means for obtaining first Call Appearance information from the D channel.

9. A PBX device according to claim 8 further comprising:

- (d) holding means for putting the first call on hold; and
- (e) repeating means coupled to said dialing means and said monitoring means, wherein upon putting the

first call on hold, the repeating means causes the dialing means to generate a second call from PDN1 to PDN2 in the same BRI circuit, and causes the monitoring means to monitor the message exchange on the D channel to obtain second Call Appearance information.

10. A PBX device according to claim 9 wherein said repeating means is coupled to said capture means and causes said capture means to obtain second Call Appearance information from the D channel.

11. A PBX device according to claim 10 wherein said repeating means causes said holding means, said dialing means and said monitoring means to repeat the steps of putting a call on hold, generating another call, and monitoring the D channel until the generated call results in a busy signal.

12. A PBX device according to claim 11 wherein said repeating means causes said dialing means, said holding means and said monitoring means to repeat the steps of generating a call, monitoring the D channel, putting a call on hold, generating another call, and monitoring the D channel until the generated call results in a busy signal with calls being generated from PDN2 to PDN1.

13. A PBX device according to claim 7 wherein said dialing means and said monitoring means are embodied in a microprocessor with an associated software program.

5 14. A PBX device according to claim 7 wherein said dialing means and said monitoring means are embodied in a field programmable gate array.

10 15. A PBX device according to claim 7 wherein said dialing means and said monitoring means are embodied in an application specific integrated circuit.

15 16. A PBX device according to claim 7 wherein said dialing means and said monitoring means are embodied in firmware in the PBX device.

20 17. A PBX device according to claim 9 wherein said dialing means, said monitoring means, said capture means, said holding means, and said repeating means are embodied in a microprocessor with an associated software program.

25 18. A PBX device according to claim 9 wherein said dialing means, said monitoring means, said capture means, said holding means, and said repeating means are embodied in a field programmable gate array.

19. A PBX device according to claim 9 wherein said dialing means, said monitoring means, said capture means, said holding means, and said repeating means are embodied in an application specific integrated circuit.

5

20. A PBX device according to claim 9 wherein said dialing means, said monitoring means, said capture means, said holding means, and said repeating means are embodied in firmware in the PBX device.

10

COPIES OF THIS DOCUMENT ARE AVAILABLE FROM THE NATIONAL ARCHIVES AT COLLEGE PARK, MARYLAND